

# DU PONT

DPM 950-28

CA 2402501

## MATERIAL SAFETY DATA SHEET

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### IDENTIFICATION

Name Copper Cyanide

Synonyms  
Cuprous Cyanide

CAS Name

Copper Cyanide (Cu(CN))

I.D. Nos./Codes NIOSH Access # = GL71500

Wiswesser Line Notation = CUCN

Manufacturer/Distributor

E. I. Du Pont de Nemours & Co., (Inc.)

Address

Wilmington, DE 19898

### HAZARDOUS COMPONENTS

Material(s)

Copper Cyanide

Chemical Family  
Metal cyanide

CAS Registry No.

544-92-3

Chemical Formula:

(Cu(CN))

Product Information and Emergency Phone

(302) 774-2421

Transportation Emergency Phone

(800) 424-9300

Approximate %

100

### PHYSICAL DATA

Boiling Point, 760 mm Hg

Decomposes

Specific Gravity

2.92

Vapor Density

% Volatiles by Vol. 0

Form

Solid

pH Information

Appearance

Fine powder

Melting Point

473°C (883°F)

Vapor Pressure

Solubility in H<sub>2</sub>O

Insoluble

Evaporation Rate (Butyl Acetate = 1)

Color

White to light tan

Odor

Odorless

Octanol/Water Partition Coefficient

### FIRE AND EXPLOSION DATA

Flash Point

Method

Autoignition Temperature

Will not burn

Flammable Limits in Air, % by Vol.

Lower

Upper

Fire and Explosion Hazards

Extinguishing Media

Special Fire Fighting Instructions When fighting nearby fire, do not flush into water course or into area where copper cyanide might mix with strong acid, and release poisonous and flammable hydrogen cyanide (HCN) gas.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

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## HAZARDOUS REACTIVITY

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Instability  
Stable  
Incompatibility  
Strong acids, nitrates & other oxidizing salts.  
Decomposition  
Will not occur.  
Polymerization  
Will not occur.

## HEALTH HAZARD INFORMATION

Exposure Limits  
OSHA 8-hr time weighted average (TWA) and ACGIH TLV<sup>®</sup>-TWA = 5 mg/m<sup>3</sup> (skin),  
cyanides as CN. ACGIH TLV<sup>®</sup>-TWA for copper dusts (as Cu) = 1 mg/m<sup>3</sup>.  
Routes of Exposure and Effects  
May be fatal if swallowed or inhaled.  
Causes eye burns.  
May irritate skin.

### First Aid

SEE ATTACHMENT

## PROTECTION INFORMATION

Ventilation  
Keep well ventilated room.  
Personal Protective Equipment Dust filter respirator where there is danger of inhaling cyanide dust. Chemical splash goggles. Rubber gloves for solutions; dry cotton gloves for powder.  
Other

## DISPOSAL PROCEDURES

Aquatic Toxicity  
TLm 96 = 10-1 ppm

Spill, Leak or Release Sweep up spillage and retain in covered container for disposal. Flush area with plenty of water to wastewater treatment system; DO NOT flush to system that may contain strong acids.

Waste Disposal Comply with federal, state, local regulations. If approved, drain to sewer to waste treatment plant or give to disposal contractor. DO NOT flush to drain which may contain strong acids.

## SHIPPING PRECAUTIONS

Transportation DOT Shipping Name = Copper Cyanide, DOT Hazard Class = Poison B. 49 STC Code = 49 234 18. UN Number 1587. IMCO Class 6.1.

### Shipping Containers

Fiber drum.  
Storage Conditions Keep dry. Keep container closed. Do not store or mix with acids, weak alkalis, or strong oxidizers. Keep away from feed or foodstuffs.

## REFERENCES AND ADDITIONAL INFORMATION

Do not breath dust or gas.  
Do not get in eyes.  
Avoid contact with skin.  
Wash thoroughly after handling. Wash contaminated clothing before reuse.  
Do not carry foodstuffs, beverages or tobacco where contamination with cyanide is possible.  
Before using, read Du Pont Copper Cyanide Plating Product Bulletin 14.

DATE: 10/79



COPPER CYANIDE MSDS ATTACHMENTHEALTH HAZARD INFORMATIONFirst Aid

Always have on hand a Cyanide First Aid Kit and a Medical Supplies Kit (see Du Pont Sodium Cyanide Product Data Sheet, Sodium Cyanide Properties, Uses, Storage and Handling Bulletin or Plating Product Bulletin No. 14). Carry patient to fresh air and have him lie down. Remove contaminated clothing, but keep patient warm. Start treatment immediately. Call a physician.

If swallowed or inhaled break an Amyl Nitrite Pearl in a cloth and hold lightly under nose for 15 seconds. Repeat 5 times at about 15 second intervals. Repeat as necessary using a fresh Amyl Nitrite Pearl every 3 minutes until 3 or 4 pearls have been given. If swallowed and patient is conscious or when consciousness returns, give patient one pint of 1% sodium thiosulfate solution (or soapy or mustard water) by mouth and induce vomiting. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Call a physician. Use artificial respiration if breathing has stopped. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician. Flush skin with plenty of water.